

Measuring job impacts of clean energy policies: what, how, and why

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on **EMPLOYMENT**
in the **green**
ECONOMY



Job Impact Measures

Purpose	Quantitative Measure (all in job-person years)	Simplest Data and Method
Forecast of total net job creation from clean energy policies	Model: direct, indirect, and induced jobs , minus job loss	Investment calculated from ratepayer and public investments plus estimation of participant investment and IMPLAN to obtain direct, indirect, and induced jobs
estimation of number of green jobs	Model: direct jobs minus non EE/RE occupations Survey: firms producing EE services or renewable energy	Investment * jobs factor, crosswalk to industry and occupation, remove non-green occupations
jobs forecast for planning WE&T for job seekers	Model: Annual increment of new jobs created, for all occupations needing training	Annual change in investment * jobs factor, crosswalk to industry and occupation, remove non-green occupations
Actual job impacts	Quantity and quality of jobs; demographic and geographic distribution of jobs	Reporting requirements by contractors and subcontractors receiving rebates or contracts



CPUC needs assessment: job impact results for all demand side programs

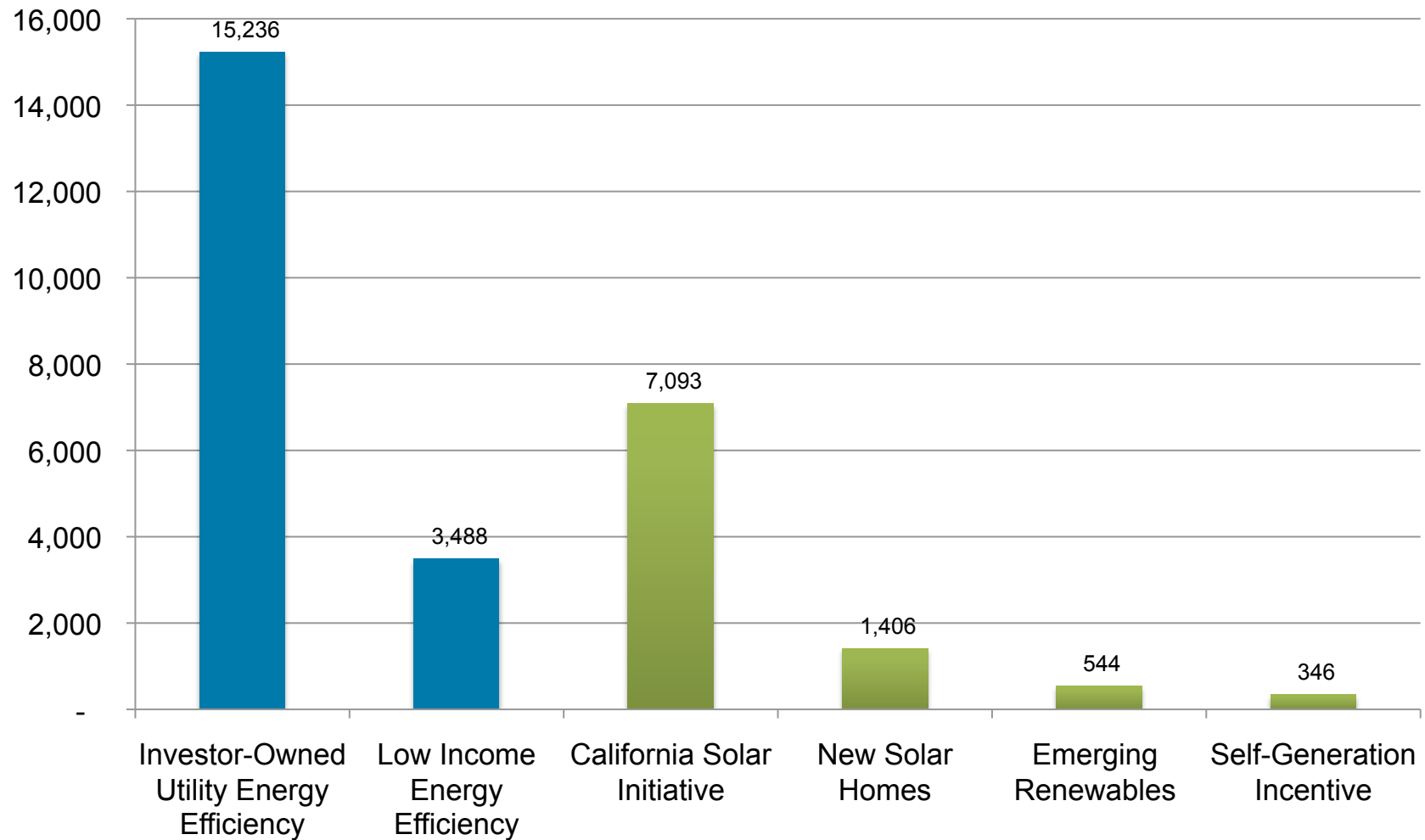
Total jobs in 2020	211,000
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Green jobs in 2020	39,000
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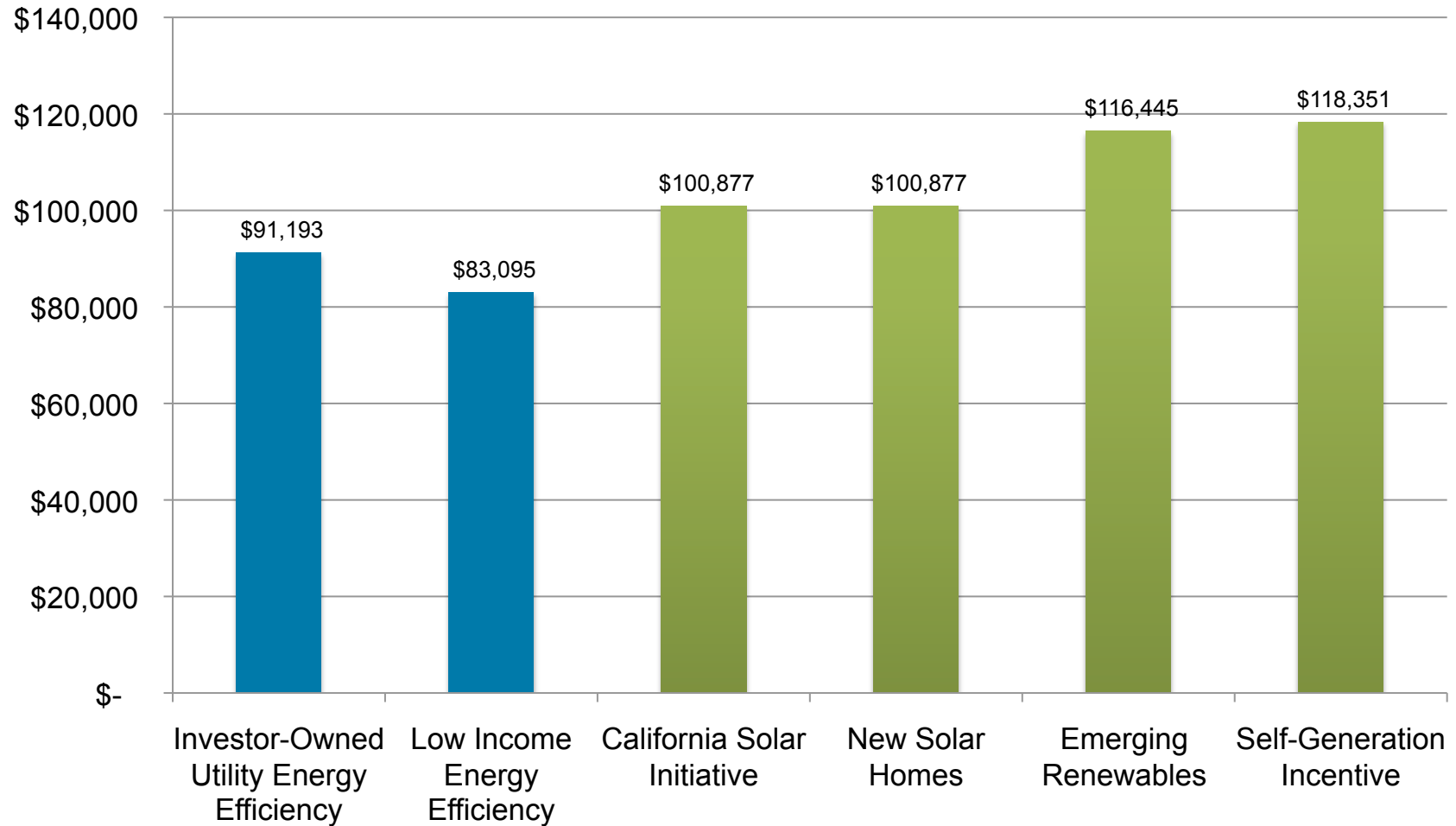
New job openings needing trained workers in 2020	5,200
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Total Jobs by Energy Efficiency or Renewable Energy Program 2010



Dollars Per Job by Energy Efficiency or Renewable Energy Program



Types of jobs:

- 2/3 construction trades workers (only 2% are specialized EE or RE workers)
- 1/6 architects, engineers, construction managers
- Wages reflect construction labor market, with professionals and union construction are higher wage, residential construction are generally low wage
- Very few skill standards in EE or RE programs
 - Unclear signal to WE&T community
 - Low quality, low wages in key energy sectors (HVAC)



Main points

- Be clear about purpose of job impact estimates
- There are simple ways to do rough projections of job impacts
- No substitute for documenting real jobs
- Quantity, quality and distribution of jobs is important
- Energy agencies have important role in shaping the kinds of jobs
- Synergy between energy goals and good jobs goals



Total Investment by Energy Efficiency or Renewable Energy Program (in Millions)

